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Hearing on

"Geospatial Information: Are we headed in the right direction or are we lost?"

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Chairman Putnam, Ranking Member Clay, distinguished Members of the Subcommittee, it is my privilege to testify before the Subcommittee on behalf of the Spatial Technologies Industry Association (STIA) concerning our views on federal government geospatial technology programs and policies.

Founded in 1996, STIA is a national trade association representing more than 60 companies in the integrated spatial technologies industry operating in the U.S. I serve as president of the association under a fifteen-member board of directors that includes many senior industry leaders.

The title of this hearing is *"Geospatial Information: Are we headed in the right direction or are we lost?"* I am confident in stating that it is STIA's opinion that we are not in fact lost. We have made significant progress on many important goals, but the road to where we are today has clearly been filled with potholes, detours, and even some wrong turns.

Federal government geospatial programs are at the crossroads, yet the path ahead will be bright if the right policy decisions are made. STIA is dedicated to assisting the integrated spatial technologies industry in the United States (U.S.) to be a full partner with government in building consensus about, and implementing, the right choices.

Now is the time for Congress to more actively engage in helping all levels of government, stakeholder organizations, and industry to produce the roadmap that will guide us to achieving great goals for our nation with geospatial technologies and spatial data. Congress must be actively involved in geospatial policy issues and programs because they are fundamental to our country's most important civilian government services, national security, homeland defense, and economic competitiveness.

My testimony expresses STIA's specific recommendations for federal government policies and programs affecting the integrated spatial technologies industry. STIA's proposals are primarily designed to accelerate the process of more efficiently and effectively spatially-enabling the business enterprise of all levels of government. I also highlight the tremendous value of, and

business case for, spatially-enabling government with commercial geospatial technologies and spatial data. My testimony directly addresses the important issues that you have targeted for this hearing:

- Progress made by the federal government to consolidate and improve utilization of the vast amounts of geospatial data sets collected by the departments and agencies across the federal government as well as by state, regional, and local governments.

- Government and industry efforts to develop standards for the collection and use of geospatial information to accelerate horizontal and vertical data sharing across the federal government enterprise and non-federal levels of government .

- Review of President Bush's Geospatial One Stop (GOS) Initiative.

- An overview of the key role that the private sector plays in achieving cost efficiencies and improving geospatial data quality for government users.

I commend Chairman Putnam for demonstrating leadership in holding this hearing to examine significant federal government policies and programs affecting the use of geospatial capabilities. In addition, this hearing helps to raise awareness within Congress about the present power, and promising future, of geospatial technologies and spatial data.

Mr. Chairman, I applaud your vision for having Congress address this highly complex, and often overlooked, issue of great consequence to our nation. While we are not lost, federal government geospatial programs need more direction from Congress to accomplish their enormous potential. It is the hope of STIA that this hearing will quicken the pace of the progress that has been made since your landmark hearing of last year.

Integrated Spatial Technologies Industry

The integrated spatial technologies industry includes a number of distinct sectors: geographic information systems (GIS) software, remote sensing and aerial imagery, spatial database software, information technology systems integration, spatial data, geo-information services and mapping, Global Positioning Systems (GPS), and location-based services. U.S.-headquartered companies are market leaders at home and abroad in this industry.

The industry in the U.S. is comprised of thousands of private companies that have combined annual revenues estimated by some observers in excess of $30 billion while employing tens-of-thousands of highly-skilled, well-paid professionals in all 50 states. A number of senior executives and analysts believe that the industry is growing steadily and was not affected as much as other components of the U.S. high-tech market that recently experienced a downturn. The integrated spatial technologies industry is truly an outstanding American high-tech success story.

It is estimated that there are millions of public and private sector professionals and citizens in the U.S., and millions more around the world, who are dependent on commercial geospatial products such as GIS software and GPS equipment. Recognition of the economic importance of the industry and robust economic multiplier effect of professionals and citizens using these capabilities is increasing. For example, the Bush Administration's High Growth Job Initiative administered by the U.S. Department of Labor Employment & Training Administration (DOL) has targeted the geospatial industry as a top priority in its national job creation strategy.

Role of STIA in Advancing the Integrated Spatial Technologies Industry

STIA is dedicated to increasing the participation of the industry in public policy decision-making, the legislative process, and regulatory actions that directly affect the vitality and success of companies in the U.S. STIA supports sound public policy that advances geo-information government and commerce based on the use of commercial geospatial products and services that enable better decision-making, greater efficiency, increased accountability, improved management, and superior performance.

STIA's corporate membership includes such companies as Autodesk, BAE Systems, Boeing, Cisco Systems, Digital Globe, EarthData, ESRI, Garmin, GDT, General Dynamics, Harris, IBM, Intergraph, Lockheed Martin, MapInfo, NAVTEQ, Northrop Grumman, Oracle, Questerra, Sanborn, Sun Microsystems, SAIC, Space Imaging, SDS, and Trimble to name a few.

Transforming Government and Private Enterprise

Commercial geospatial technologies and spatial data are transforming government and private enterprise by enabling more effective and efficient operations, improved communications, and, ultimately, better decision-making. These capabilities are assisting the public and private sectors to do such things as growing the economy, building well-designed infrastructure, saving lives, protecting critical infrastructure and strategic assets, improving quality of life, conserving the environment and empowering citizens with vital information about their communities.

Commercial geospatial technologies and spatial data are being used daily by almost every agency of the federal government and agencies in all 50 states as well as an estimated 80% of local governments, regional governments, and public authorities. Police departments, fire departments, public health agencies, emergency management agencies, environmental agencies, transportation authorities, urban planning departments, and land record offices are just a few of the core units of government that are dependent on geospatial capabilities. Also, each day the number of private business users increases as more companies learn how these capabilities can improve productivity and profits.

During the U.S. House Subcommittee on Government, Management and Information Technology's 1999 hearing on federal government GIS policies, Wyoming Governor Jim Geringer testified that "Geographic Information Systems, properly used, are the most significant applied technology since the advent of the World-Wide-Web and the Web Browser." He told Subcommittee Members that the potential for GIS “is unlimited since every service at any level of government can in some way be associated with spatial reference.”

In fact, it is commonly estimated that 80% of all public and private sector data sets have a spatial reference that enables them to be analyzed with GIS. The use of GIS allows the inventorying, analysis, visualization, and communication of complex relationships among people, land, natural features, man-made structures, and an almost unlimited number of factors. GIS is a powerful tool that provides the ability to understand, visualize, and manage vast numbers of complex data sets which are associated with the most complicated challenges facing society today.

Perhaps most importantly at this time in our nation's history, commercial geospatial technologies and spatial data are mission critical to America's homeland security and defense of freedom around the globe. The Department of Defense (DoD), Central Intelligence Agency, and

U.S. Department of State made extensive use of these capabilities prior to, and during, Operation Enduring Freedom and Operation Iraqi Freedom.

According to the DoD, commercial geospatial technologies and spatial data played a key role in providing the information superiority, and guidance for "smart weapons," that assisted U.S. forces to quickly defeat the enemy during the initial major combat operations with relatively few casualties and limited collateral damage. After helping to defeat the enemy on the battlefield, many of these same geospatial capabilities are being used by America and its coalition partners in our efforts to win the peace by rebuilding a free Iraq and Afghanistan.

On the home front, U.S. Department of Homeland Security (DHS) officials have publicly stated that geospatial technologies are one of the top three technologies that the department views as being essential for accomplishing its mission. The DHS is currently working with all levels of government and the private sector to achieve geospatial preparedness for the nation.

In this regard, DHS is working with other appropriate federal agencies to implement Homeland Security Presidential Directive-7 (HSPD-7) that was issued during December of 2003 by President Bush. HSPD-7 directs the department to geospatially map, image, analyze, and sort critical infrastructure and key resources by utilizing commercial satellite and airborne systems, and existing capabilities within other agencies. STIA commends the President's vision for issuing HSPD-7 and strongly supports DHS' efforts.

The DOL High Growth Job Initiative for the geospatial technologies industry is another very important federal government initiative. DOL's initiative addresses the workforce development challenges associated with rapidly growing demand for commercial geospatial products and services as well as the need to maintain the leadership of American-based companies in this important component of the U.S. economy and security strategy. The geospatial industry is one of only twelve high growth industries on which DOL is focusing.

The return-on-investment and business case for the implementation of commercial geospatial technologies and spatial data is very positive and well documented for deployments in federal, state, regional, local, and tribal government as well as in the private sector. There is, however, no question that many senior government officials, private sector executives, and the majority of the general public are not yet fully aware of these remarkable success stories.

There is an urgent need for the public and private sectors to work together to educate senior decision-makers and the public about the proven success of commercial geospatial technologies and spatial data. Today's hearing provides an exceptional chance to underscore how President Bush's Management Agenda and E-Government programs such as the GOS initiative are utilizing these capabilities to improve the performance of government, increase the return-on-investment for taxpayers, and achieve a more citizen-centric government.

Proven Record of Success, Ready-to-Go Solutions

There are literally hundreds-of-thousands of success stories about the use of commercial geospatial technologies and spatial data in our country. I will highlight a number of examples that may be of particular interest to Chairman Putnam, Ranking Member Clay, and other Members of the Subcommittee.

- The DoD used commercial satellite imagery for targeting and damage assessment in Operation Enduring Freedom and Operation Iraqi Freedom. These same capabilities are now being used to rebuild a free Afghanistan and Iraq.

- The Secret Service, in coordination with state and local governments, uses geospatial capabilities in command and control operations centers to provide protection for high profile national events such as the presidential inaugural, presidential political conventions, Super Bowl, and Olympics.

- The National Commission on Terrorist Attacks Upon the United States (also known as the 9-11 Commission) is using GIS to visualize and analyze the events of the September 11th attacks.

- New York City made extensive use of GIS and GPS during the response and recovery efforts following the September 11th attacks.

- The State of Florida and many local governments in the state are using GIS to plan for, and carry out, evacuations caused by hurricanes.

- The City of St. Louis is using GIS to analyze and plan key infrastructure, land-use, and economic development projects.

- Macomb County, Michigan is using GIS to assist in the county-wide deployment of E-911 services.

- The City of Los Angeles is using web-GIS to provide city officials and the general public real-time traffic flow information for major streets.

- The City of Sacramento is using GIS for planning and implementing capital improvement projects.

- The City of Boston Police Department is using GIS to assist crime reduction activities.

- The Commonwealth of Pennsylvania is using GIS to track, analyze, and respond to outbreaks of the West Nile Virus.

- Warren County, Ohio is using GIS to improve and automate its land information and real estate records systems.

- Sears is using GIS to manage its national fleet of delivery trucks.

Problems, Challenges, and Solutions

The federal government has over the years been a true leader in the use of commercial geospatial technologies and spatial data while greatly assisting non-federal levels of government to deploy these capabilities. The time has come, however, to think anew about the federal government's role and programs needed for our nation to realize the full potential of commercial geospatial technologies and spatial data.

In general, federal government geospatial programs would benefit from increased awareness by the industry as a whole, greater participation by industry experts from all sectors, and more specific goals linked to the type of solid return on investment analysis commonly done in the private sector. Most importantly, the private sector must be a full partner -- *not just a vendor* -- in the process of developing plans and policies to effectively and efficiently implement programs for spatially-enabling the government enterprise.

The spatial technologies industry is leading the way in terms of innovation and investment to provide the high quality products and services that government needs to meet its highest priorities. We must support and accelerate the movement from process intensive and federal government-centric geospatial policies to ones that are market-driven and citizen-centric. The Bush Administration's U.S. Commercial Remote Sensing Space Policy, which was issued last year, is an excellent example of meaningful progress toward this goal.

Based on the views held by a majority of STIA member companies and many of their public sector customers, STIA holds the opinion that the federal government needs a well-funded, highly-coordinated business plan to acquire and maintain the key framework data layers of the National Spatial Data Infrastructure (NSDI) in conjunction with state, regional, local, and tribal government as well as private industry. The Bush Administration's GOS initiative, U.S. Geological Survey's (USGS) National Map program, Federal Geographic Data Committee's (FGDC) grant programs, and a myriad of other federal programs do represent significant progress for the NSDI.

It is time, however, to establish a true business plan for the NSDI with integrated applications and systems that accomplish high priority functions of government such as homeland security and e-government. This new business plan should match the federal government's funding commitments to the strong business case and return-on-investment potential for this vitally important national asset. The business plan's structure should be based on an enterprise approach that maximizes principles of interoperability, integration, and sharing. The goal should be to build integrated, interoperable systems and solutions rather than single purpose applications and data sets.

In addition, the business plan should, to the maximum extent feasible and appropriate, provide incentives to all levels of government to procure commercial geospatial products and services to complete these framework data layers for the NSDI with integrated, interoperable systems and solutions in a timely manner.

Many private and public sector leaders in the geospatial community think that the lack of an effective federal government business plan for the NSDI is the main cause of problems such as "stove-piped" spatial data programs, stalled or cancelled GIS deployments, duplication of spatial data collection, and the slow progress to adopt all necessary spatial data and GIS software interoperability standards. In the absence of a business plan, these problems will undoubtedly become worse ultimately costing the taxpayers much more money than is necessary to spatially-enable government.

Yet, we must be very careful not to confuse apples and oranges when defining and addressing the problems of "stove pipe" programs and duplication of effort in this business plan. Spatially-enabling the government enterprise will inherently mean that government agencies will have similar geospatial capabilities that they use in their own workflow.

During this subcommittee's hearing last year on this topic, former OMB Director Mark Forman estimated that duplication of spending on geospatial data could be as high as 50% when taking into account all levels of government. While everyone in geospatial community acknowledges that duplication of expenditures and "stove pipes" are problems, STIA is not aware of evidence that supports a figure as high as 50%.

Duplication of expenditures and "stove-pipe" problems in government agencies should be defined by replication of functionality and use rather than by the mere presence of geospatial capabilities. In this regard, we should establish the mission of the business plan to achieve the most efficient and effective use of geospatial capabilities across the enterprise rather than to simply cut costs. Simply stated, the federal government should seek to maximize the taxpayers' investment in geospatial capabilities by focusing on the value of spatially-enabling government rather than solely its price.

Another significant issue that needs attention is the lack of consistent and well defined standards for spatial data security and access. This is important from the standpoint of concerns about homeland security, crime prevention, and individual privacy. Despite the progress being made by the FGDC Homeland Security Working Group, currently there is no single policy or set of guidelines governing how the federal government handles and disseminates spatial data. As a result there have been differing policies among various federal agencies that have raised serious concerns in the industry and user community. These discrepancies have been compounded by a similar lack of uniform policies among state, regional, and local governments.

On one hand, all levels of government must be careful not to provide highly sensitive spatial data sets to individuals who would use this information for criminal or even terrorist activities. On the other hand, spatial data sets are essentially the fuel for GIS and other geospatial capabilities. Overly restrictive policies could choke the industry and diminish the power of these capabilities for the geospatial user community.

The results of a recent Rand Corporation report entitled "Mapping the Risks: Assessing the Homeland Security Implications of Publicly Available Geospatial Information" highlights the importance of not overreacting to this challenge. Rand studied the possible threat that publicly available geospatial data on federal government web sites might pose in the hands of terrorists. Rand concluded that less than one percent of the 629 federal spatial data sets they reviewed appeared to have notable value to would-be terrorists. Although the overall tone of the Rand report is reassuring, the need for stronger federal government leadership on spatial data access and security policies should not be dismissed.

This issue gets even more complex when one considers the fact that sensitive spatial data on state, regional, and local government critical infrastructure is in some cases being processed and integrated into GIS at overseas commercial facilities located in countries such as India, Pakistan, and even China. While the fierce and dynamic global economy has compelled many American-based companies to engage in offshoring, it is the responsibility of the federal government to determine if this practice will cause any security risks that should be mitigated.

Notwithstanding these challenges that are inhibiting the growth of the industry and the realization of the full potential of the NSDI, I want to strongly emphasize the fact that commercial geospatial products and services have a proven record of success and offer ready-to-go solutions right now.

Faster progress could be achieved if the public and private sectors of the geospatial community formed a clear and compelling consensus on how the federal government can best assist in the development of a sustainable and market-driven NSDI that will provide a foundation for spatially-enabling the business enterprise of homeland security, e-government, public safety, economic development, environmental conservation, and other vital governmental functions. This consensus could also enable the NSDI to be a robust platform for emerging private sector location-based services and mobile commerce.

In this regard, STIA strongly supports the National States Geographic Information Systems Council's (NSGIC) white paper entitled "Saving Lives and Saving Money - An Urgent Call to Build the National Spatial Data Infrastructure in Support of Public Safety" that was approved by the NSGIC membership during its business meeting at their 2002 annual conference.

In order to be a better partner in the effort to make the vision and potential of the NSDI a reality, STIA recommends that the federal government implement the following ten priority actions:

Action 1. *Establish a blue ribbon task force of experts from government, industry, academia, stakeholder groups, White House, and Congress to assess the progress made to date on spatially-enabling the government enterprise, and to recommend options for future policies.*

Federal government geospatial programs are at the crossroads. While there have been significant successes, it is widely acknowledged in the geospatial community that there is a need for a more inclusive and consensus-based strategy to enable federal government geospatial programs to make the NSDI a reality. In particular, there is a need to more actively enage the private sector in the NSDI to ensure that it is market-driven and sustainable.

We should not continue to look to the federal government to provide the majority of policy alternatives through a "top down" approach; rather, all stakeholders should have a meaningful role in assessing the problems and recommending the solutions. The White House Office of Management and Budget's (OMB) Office of Electronic Government, in conjunction with the FGDC, should establish and oversee a blue ribbon task force to accomplish this goal. In order to define a vision for the task force and the steps that would be needed to make it a reality, a national summit could be called to kick off the effort.

Action 2. *Adopt market-driven standards for spatial data and GIS software interoperability in a timely manner.*

The federal government should be careful, however, not to let standards adoption limit the choices of government buyers and consumers, undermine successful business models, or inhibit innovation.

The federal government should adopt market-driven approaches that reward companies which invest in developing more robust capabilities that enable users to achieve better performance and outcomes. The work being done by the Bush Administration's GOS initiative, FGDC, USGS, International Organization for Standardization, and Open GIS Consortium (OGC) should be accelerated with greater federal support.

Action 3. *Strengthen the management structure for geospatial programs by establishing a dedicated position in the White House OMB Office of Electronic Government responsible for administering and coordinating national geospatial policies and programs.*

This OMB official should directly oversee the work being done by the GOS initiative and FGDC. Section 216 of the E-Government Act of 2002 authorizes OMB to establish a director position in the Office of Electronic Government charged with the responsibility of working with the administrator of the office, federal agencies, non-federal levels of government, and private industry to establish common protocols for the development, acquisition, maintenance, distribution, and application of geographic information. The act also requires the director to oversee coordination with non-federal levels of government, public-private partnerships, and other interested persons to align geographic information, develop common protocols, and adopt standards.

STIA ardently urges Congress to provide the full funding required by OMB to establish this director position and carry out all the activities detailed in Section 216.

Action 4. *Establish a business plan that includes a new grant federal funding program, possibly modeled on many aspects of the Federal-aid Highway Program, to form consistent, standards-based, and equitable partnerships with state, regional, local, and tribal government as well as the private sector to build and maintain a market-driven and sustainable NSDI with integrated applications and systems that accomplish high priority functions of government such as homeland security and e-government.*

This business plan should be designed to foster market-driven, performance-based partnering that will leverage financial resources at each level of government. Federal agencies and non-federal government grantees should make use of commercial geospatial products and services to the maximum extent feasible and appropriate to implement these activities detailed in the business plan. This business plan should be fully integrated with the USGS' National Map Program and the GOS initiative.

Action 5. *Develop a national strategy to achieve the level of geospatial preparedness required to address high priority homeland security threat scenarios identified by Congress and the White House. This strategy should also deal with all major hazards determined by state, regional, local, and tribal government as well as the private sector to endanger lives, property, and critical infrastructure*.

STIA encourages Congress to provide strong support for the work being done by the DHS to formulate a national strategy for geospatial preparedness.

The White House National Strategy for Physical Protection of Critical Infrastructures and Strategic Assets, published during 2003, included a key recommendation to "develop an integrated critical infrastructure and key asset geospatial database." Homeland Security Presidential Directive-7 directs the department to geospatially map, image, analyze, and sort critical infrastructure and key resources by utilizing commercial satellite and airborne systems, and existing capabilities within other agencies.

Congress should allocate the funding necessary for the DHS to determine the best way of achieving these important White House goals.

Action 6. *Support the development of reliable and consistent metrics and data about the geospatial enterprises in the federal government.*

It is extremely important that the federal government be committed to developing and maintaining appropriate geospatial metrics about its many funded activities. Government and industry must work together to come up with the framework for those metrics and overcome reluctance to measure, report and share information.

One of the fundamental problems in the geospatial arena is the lack of reliable and consistent measures and data about virtually every important management factor: spatial data collection plans, spatial data holdings, planned applications, geospatial data usage, and geospatial budgets. The federal government should lead the way in measuring its own geospatial enterprises and making those measures available to the public.

These measures have many benefits both for government and the industry. Sound forecasts about federal government demand for commercial geospatial products and services will enable the private sector in the U.S. to have the capability and capacity to deliver what is needed.

By way of example of government and industry cooperation in developing better metrics, I would note that STIA has been working with the DOL on the department's High Growth Jobs Initiative for the geospatial technologies industry. The purpose of this DOL initiative is to use the demand for workers from this and other high growth industries to drive the education/training and employment actions of our national work force system in order to produce workers whom employers want and need to hire. Unfortunately, the lack of good metrics about the geospatial industry has been identified as a major barrier. STIA hopes to work with DOL in a cooperative effort to define the industry and its work force needs. This lack of metrics is a pervasive problem that requires significant government-wide focus.

Action 7. *Ensure that geospatial technologies and spatial data are well-defined and fully integrated in the OMB's Federal Enterprise Architecture (FEA)*.

Inclusion in the FEA will help assure that geospatial technologies are properly integrated into all necessary areas of the federal enterprise. Furthermore, this measure will help to expand the ability of federal agencies to collaborate and share critical geospatial information for homeland security and other government service missions.

Action 8. *Partner with industry and public sector organizations to raise awareness about "best practices," performance-based business cases, and positive return-on-investment (RIO) case studies for the use of commercial geospatial technologies and spatial data.*

There are many excellent examples of successful deployments of geospatial capabilities at all levels of government and in the private sector. Sharing information about "best practices," business cases, and ROI case studies can help to reduce, and prevent, problems such as duplication of efforts and "stove piping." This type of information could be made available to the public through the GOS web site.

Action 9. *More forcefully encourage federal agencies and federal grantees to make use of standards-based commercial geospatial products and services to the maximum extent feasible and appropriate.*

The federal government should make a more diligent effort to define and end geospatial activities that are not inherently governmental in nature in order to avoid, to the greatest degree possible, competition with the private sector. One of the main criteria for making this determination should be based on whether superior performance and outcomes can be achieved for citizens by using commercial geospatial products and services.

The OMB and U.S. Department of Interior (DOI) should include the private sector on the board of directors for the GOS initiative. An industry committee should be formed with a common representative invited to attend GOS board meetings and make comments about pending issues. Direct and balanced private sector input would increase confidence, speed the adoption of industry standards, and provide a transparent and vendor-neutral means for the DOI and GOS board to learn about innovations and trends in the integrated spatial technologies industry.

STIA also believes that this action should include specific measures by OMB and National Institute of Standards and Technology to develop and disseminate consistent guidance to federal agencies with respect to the use of OMB Circular A-119 in the adoption of standards developed by voluntary consensus organizations. The timely inclusion of international and industry standards in federal acquisitions is a market-driven step toward the effective advancement of innovative, easy to integrate technology products and service capabilities.

Action 10: *Empower the DHS, in conjunction with the FGDC Homeland Security Working Group, to take a lead role on issuing regulations and guidelines for spatial data security and access.*

Currently there is no single policy or set of guidelines governing how the federal government handles and disseminates spatial data in the context of concerns about homeland security and individual privacy. Differing policies among various federal agencies have raised concerns in the industry and user community. These concerns have been compounded by a similar lack of uniform policies among state, regional, local, and tribal governments.

While experts have determined that the vast majority of federal spatial data available on web sites is of limited or no value to would-be terrorists, some data sets are clearly very sensitive. The practice of offshoring the processing of spatial data sets about critical infrastructure of state, regional, and local governments for GIS has further exacerbated worries. The DHS, in conjunction with the FGDC Homeland Security Working Group, should provide leadership in addressing these challenges and preventing potential problems from occurring.

STIA is committed to supporting all public and private sector entities working to improve federal government policies and programs to achieve these ten recommendations. STIA seeks to develop a consensus within the industry and public sector user community about these priority actions and other related national public policy issues. STIA has been working with the Council for Excellence in Government, Geospatial Information & Technology Association, Intelligent Transportation Society of America, National Association of Counties, NSGIC, Urban and Regional Information Systems Association, and many other stakeholder organizations on consensus building activities.

NSDI Vision, Performance, and Outcomes

If the federal government implements these ten priority actions, the great potential of a market-driven and sustainable NSDI can be achieved. The business case for the NSDI has never been stronger given the proven success of geospatial capabilities for both military and civilian government mission critical functions.

The NSDI is a powerful tool to achieve the level of preparedness required to win the War on Terror and accelerate the knowledge-based economy while creating high-wage, high-growth jobs in the U.S. These are the types of jobs that are fundamental to our nation's economic well-being and global competitiveness.

We are now facing security threats from weapons of mass destruction which resourceful and determined enemies of America seek to use in order to cause maximum harm to our citizens, infrastructure, economy, and ultimately, our way of life. We cannot fully meet these new national security threats and economic challenges with old approaches. The military has already recognized the need to transform its methods of fighting wars through a network-centric, information-rich environment that permits rapid, effective sensing and response to increasingly complex and changing threats. Our nation's homeland security and economic security deserve no less.

Transformation using standards-based, interoperable geospatial technologies and spatial data will not happen overnight, but failure is not an option. The NSDI should be a core component of the foundation for America's national security, economic prosperity, and social progress in the 21st Century.

Conclusion

Once again, I would like to thank Chairman Putnam and Ranking Member Clay for the opportunity to testify and submit a written statement for the hearing record. I look forward to working with both of you and the other distinguished Members of the Subcommittee.

STIA is committed to supporting sound federal government public policy and programs that will promote the use of commercial geospatial capabilities through free market competition while achieving a more citizen-centric, market-driven, and performance-based government that provides the best possible services to the public with the greatest financial and non-monetary return on the taxpayers' investment. We are not lost, but we must make mid-course corrections to achieve a secure future for our nation.